NPIC/TSSG/RED-006-70
5 January 1970

MEMORANDUM FOR: Chief, Special Contracting & Procurement Staff, TSSG/NPIC

THROUGH : Chief, Technical Services & Support Group, NPIC

SUBJECT : Production Procurement of Advanced Stereo Rhomboids, Model II

1. One of the problem areas previously encountered during development of the prototype Advanced Stereo Rhomboids, Model II, occurred in the optical switch assembly. An unsatisfactory mounting design and incorrect assembly of the glass components of the switch caused image degradation and image shift. During a meeting on 4 December 1969 with representatives of [redacted] of [redacted] stated that a new optical switch had been assembled on a redesigned mount and that the performance of this breadboard assembly of the new switch had been observed. [redacted] stated that the new switch operated satisfactorily and that the problems previously encountered had been solved. [redacted] also stated that presently there are no problems in the development of this instrument and that no future problems were foreseen.

2. Successful operation of the optical switch was one of the milestones in the development of this instrument. In view of the statements made by [redacted] it appears that this milestone in the development of the instrument has been achieved.

3. A second milestone in the development of this instrument will occur early in February 1970. At this time, the assembly of the main body of the instrument will have been completed and the complete optical system will have been aligned. Successful optical alignment constitutes the second milestone. However, it is considered that the major part of the alignment problem has been solved with achievement of the successful operation of the optical switch--the first milestone.

4. On 3-4 November 1969, new optical design data was reviewed by Agency personnel and [redacted] consultant. At the time of this meeting, [redacted] verbally stated that, although the type of design data presented would not reveal all possible problems of the design, he could see no reason for terminating development of the prototype rhomboids. In a subsequent letter commenting on this meeting, [redacted] stated that he felt "the sysbem was probably good enough."

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5. In view of the above achievements and judgments, it would appear that success with the second milestone early in February 1970 should probably assure reasonable success in the development of the prototype.

6. An informal poll of the community indicates the following requirement for procurement of production quantities of Advanced Stereo Rhomboids, Model II:

IEG	FY-70	223
IAS	FY-70	20
DIAAP-9	FY-71	20
	Total	263

7. At the present time, [redacted] will only quote a budgetary cost estimate for production quantities of these instruments. Probably a somewhat better estimate will be available at the time of delivery of the prototype on 15 March 1970. Exact costs will probably not be known until completion of a pilot lot of fifteen instruments early in December 1970. The budgetary cost estimate quoted by [redacted] is [redacted] for the basic instrument and any one pair of the 1X, 2X, or 3X objectives. Each additional pair of objectives are estimated to cost [redacted] for each pair. Therefore, the total package of the basic instrument and three pairs of objectives are estimated at [redacted]

25X1
25X1
25X1
25X1
25X1

8. Attached is a schedule of events indicating the development of the prototype instrument and follow-on production units. This schedule has been reviewed by [redacted] personnel, by the Research & Engineering Division, and by NPIC operating Divisions. The requirement of any schedule is that it should provide as many instruments as possible by the target date of 15 December 1970, and at the same time minimize risk to both the contractor and to NPIC. The attached schedule is considered to be the one most realistic and acceptable to several proposed.

25X1

9. It should be noted that the schedule proposes that work be started on the production units before delivery, testing, and evaluation of the prototype. However, this work is not to begin until success with the second milestone in the prototype development--optical alignment--has been demonstrated. At this time, a reasonable degree of success in the development of the prototype can be predicted. Furthermore, the larger expenditures for tooling, fabrication, and purchasing of parts other than optical glass is delayed until after a period of in-house testing and evaluation of the prototype instrument. After this point in time, the unknowns are questions as to the effect that production construction practices and tolerances--as opposed to prototype construction techniques--will have on instrument performance. However, it is not expected that performance of the instrument will be appreciably affected.

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10. It is requested that the necessary documentation be prepared so as to expedite a production contract with [redacted] within the desired attached scheduling. 25X1

[redacted] 25X1

Chief, Research & Engineering Division,
TSSG

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25X1 NPIC/TSSG/RED/SDB/[redacted] (5 January 1970)